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1.2.4 PROCESS SPATIAL QUERIES AND DISPLAYS

L&M spatial data is a subset of the information contained in the ALMRS data store. The data shall be graphically portrayed to the user in logical groupings or themes based on specified selection criteria. The spatial display of land, case, land status, and reference data supports land and mineral case processing. Additionally, it enhances the ability of the public and BLM users to perform inquiries into the public land records. Based on the graphic symbology used for display, a user shall be able to quickly extract information about an area of interest. If more detailed information is needed a user shall optionally be able to perform spatial queries on an item of interest and retrieve alphanumeric case and land data. Since spatial data is geographically referenced, multiple themes shall be overlayed in the display. The geographic extent of the spatial display shall be defined by the area of interest. The area of interest shall optionally be redefined at any time allowing the user to have a seamless view of the data not restricted by any predefined map boundaries. This gives the user a better insight into the present condition of a given geographic area, which in turn facilitates better decision making.

Future Enhancements:

The user will be able to specify boolean operators to spatially retrieve information based on combinations of thematic data specifications and/or thematic views.

Users will be able to query and process data based on specifying thematic data by one date and the AOI based on another.

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1.2.4.1 DISPLAY LAND THEMES

The land themes consist of spatial data linked to alphanumeric attributes contained in the Rectangular, Rectangular-based, Geopolitical, Geopolitically-based, and L&M Record-based submodels. Land spatial data represents the coordinate foundation of all ALMRS spatial data. All themes shall be built from or controlled by this foundation. Because all themes are geographically referenced, the user shall subsequently be able to view the relative location of data in multiple themes simultaneously. Through the use of unique graphic symbology, the user can visually determine characteristics about the land contained within the selected area of interest (AOI). Land spatial data is comprised of 3 individual themes, Rectangular Rectangular Based Land, Geopolitical/Geopolitical Based Land, and L&M Record-based Land themes.

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1.2.4.1.1 DISPLAY RECTANGULAR/RECTANGULAR BASED LAND THEME

The display of the Rectangular/Rectangular Based Land Theme shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric land information shall be linked to features.

The default theme display shall contain all Rectangular/Rectangular Based land features. Each feature and its associated label shall be displayed using default symbology (see Appendix X). The user shall be provided with the option to display a subset of features through a point and click selection from a graphical user interface (GUI).

The system shall provide capabilities to display the association between georelated scanned documents and rectangular land features within the AOI. An indicator shall appear notifying the user that georelated scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated georelated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

Reliability of townships, sections, special surveys, and monuments shall be shown in one of two ways. One option shall be to display a reliability diagram in a separate spatial window. The display shall contain townships, sections, and special surveys with symbology based on the following reliability levels, <40ft, >40 <200ft, and >200. In addition, the display shall contain recovered (control station) monuments with symbology based on the following reliability levels, <3ft, >3 <10ft, >10 <40ft and >40ft. A second option shall be to symbolically display the different levels of reliability in the main spatial display.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The user shall have the capability to spatially query on a parcel of land, or multiple parcels of land, and generate a land report request to process 3.7, Produce Land Description Structured Reports. The report shall subsequently appear in a separate text window.

The following features shall be included in the Rectangular/Rectangular Based Land Theme. Each feature subset is separated by a single line in the table.

Rectangular/Rectangular Based Land Description
Meridian
Township
Section
Aliquot Part
Government Lot
Donation Land Claim
Rectangular Based Irregular Subdivision
Rectangular Based Parcel
Rectangular Based Tract

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Rectangular Based Tract Block
Rectangular Based Tract Block Lot
Rectangular Based Tract Lot
Township Lot
Township Lot Tract

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1.2.4.1.2 DISPLAY GEOPOLITICAL/GEOPOLITICAL BASED LAND THEME

The display of the Geopolitical/Geopolitical Based Land Theme shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric land information shall be linked to features.

The default theme display shall contain all Geopolitical/GeopolItical Based land features. Each feature and its associated label shall be displayed using default symbology. The user shall have the option to display a subset of features through a point and click selection from a graphical user interface (GUI).

Georelated scanned documents may be associated with a Geopolitical/Geopolitical Based land feature displayed within the AOI. If so, an indicator shall appear notifying the user that georelated scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated georelated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The user shall have the capability to spatially query on a parcel of land, or multiple parcels of land, and generate a land report request to process 3.7, Produce Land Description Structured Reports. The report shall subsequently appear in a separate text window.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land data shall be flowed back to process 1.2.6 for export.

The following features shall be included in the Geopolitical/Geopolitical Based Land Theme. Each feature subset is separated by a single line in the table.

Geopolitical/Geopolitical Based Land Description
BLM Administrative Area
BLM District
BLM Resource Area
Congressional District
Governmental Division
Minor Civil Division
Exchange Survey
Exchange Survey Tract
Geopolitical Based Metes and Bounds Survey
Geopolitical Based Parcel
Geopolitical Based Parcel Lot

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Geopolitical Based Tract
Geopolitical Based Tract Lot
Geopolitical Based Indian Allotment
Geopolitical Based Indian Allotment Tract
Homestead Entry Survey
Homestead Entry Survey Tract
Land Grant
Land Grant Tract
Mineral Survey
Mineral Survey Claim
Mineral Survey Claim Lot
Private Land Claim
Private Land Claim Parcel
Private Land Claim Tract
Small Holding Claim
Small Holding Claim Lot
Small Holding Claim Parcel
Small Holding Claim Tract
State
Townsite
Townsite Block
Townsite Block Lot
Townsite Lot
Townsite Tract
Native Region
State Recording District
Texas Tract
Coal Survey
US Survey
US Survey Block
US Survey Block Lot

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US Survey Lot
US Survey Tract
US Survey Tract Block
US Survey Tract Block Lot
US Survey Tract Lot
US Survey Parcel
RMB Township
RMB Fraction

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1.2.4.1.3 DISPLAY L&M RECORD-BASED LAND THEME

The display of the L&M Records-Based Land Theme shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric land information shall be linked to features.

The default theme display shall contain all L&M Record-Based land features. Each feature and its associated label shall be displayed using default symbology (see Appendix X). The user shall be provided with the option to display a subset of features through a point and click selection from a graphical user interface (GUI).

The system shall provide capabilities to display the association between georelated scanned documents and L&M land features within the AOI. An indicator shall appear notifying the user that georelated scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated georelated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The user shall have the capability to spatially query on a parcel of land, or multiple parcels of land, and generate a land report request to process 3.7, Produce Land Description Structured Reports. The report shall subsequently appear in a separate text window.

The following features shall be included in the L&M Record-Based Land Theme. Each feature subset is separated by a single line in the table.

L&M Record-Based Land Description
L & M RCRD BSD Metes & Bound
L&M REC BSD Bounds
L&M REC BSD Geo Reference
L & M RCRD BSD Irregular Subdivision
Islnds Islts Rocks Pinnacles
Linear Based
Location Based
Exception

1.2.4.2 DISPLAY L&M BASED LAND THEME

L&M based displays graphically portray specific case information or derived land status data. This supports case processing and user inquiries into the public land records. The displayed symbology shall be based on alphanumeric attributes contained within the ALMRS data store or the Land Status data store. All displays shall be geographically referenced to the underlying land theme. Based on the displayed symbology a user can quickly determine case and/or land status information within the defined area of interest. If more detailed information is needed, a user shall be able to optionally perform spatial queries on specific items of interest and retrieve alphanumeric case and status data.

1.2.4.2.1 DISPLAY LAND STATUS

Land status displays shall be based on alphanumeric attributes contained within the Land Status data store. By displaying land status for a given geographic area of interest the user shall be presented derived information which may satisfy initial queries. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report. Land status shall be comprised of five individual themes; Surface Segregations, Subsurface Segregations, U.S. Surface Rights, U.S. Subsurface Rights, and Surface Management Agency (SMA) and Ownership (conveyed ownership). Each theme shall be geographically referenced, enabling it to be displayed separately or in combination with other themes. In the event a user wants to view several land status themes, the user shall be provided with the capability to set the display order. This shall enable the user to assure solid fill symbology does not eradicate underlying spatial data.

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1.2.4.2.1.1 DISPLAY SMA AND OWNERSHIP THEME

The display of the SMA and Ownership (conveyed ownership only) Theme shall be based on alphanumeric attributes contained within the Land Status data store. By displaying the SMA and ownership theme for a given geographic area of interest the user shall be presented derived information which may satisfy initial inquiries about the status of the land. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report.

The default display of this theme shall contain all SMA and ownership features. Each feature and its associated label shall be displayed using default symbology (see Appendix X).

The required relationship shall be maintained between the SMA and ownership spatial data and its associated geographic location.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

SMA and ownership attribute values shall be compared between adjacent geographic locations to determine if they are equal. If the values are equal, then the geographic locations shall be aggregated, interior lines dissolved, and one associated label displayed.

The system shall provide the user an option to display a subset of features contained within the SMA and Ownership Theme. The selection criteria used to identify a specific subset of features shall be limited to the symbolization attribute value (e.g., a specific surface management agency). This option shall be activated from a menu selection made from the graphical user interface (GUI). Refer to table below.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land status data shall be flowed back to process 1.2.6 for export

The following features shall be included in this Theme. Each feature subset is separated by a single line in the table.

SMA and Ownership
Bureau of Land Management - Oregon & Calif. & CBWR Lands - Land Utilization Proj Lands
Bureau of Reclamation
Bureau of Indian Affairs
Fish & Wildlife Service
National Park Service
Forest Service - Oregon & Calif. Lands - National Grasslands
Department of Defense
Corps of Engineers

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Department of Energy
Department of Transportation - Coast Guard
Department of Commerce
Department of State - International Boundary - Mexico - International Boundary - Canada
Veteran's Administration
Tennessee Valley Authority
NASA
Department of Justice - Bureau of Prisons
Indian Lands
ANCSA
Conveyed to State
Non-Federal
Federal Lands - Other
Complex

1.2.4.2.1.2 DISPLAY FEDERAL RIGHTS THEME

Federal rights displays shall be based on alphanumeric attributes contained within the Land Status data store. Federal rights shall be partitioned into two separate themes, Subsurface Rights and Surface Rights. By displaying federal rights for a given geographic area of interest the user shall be presented derived information which may satisfy initial land status inquiries. If more detailed information is needed, the user must display specific case information themes, or request an alphanumeric land status report.

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1.2.4.2.1.2.1 DISPLAY FEDERAL SUBSURFACE RIGHTS THEME

The display of the Federal Subsurface Rights Theme shall be based on alphanumeric attributes contained within the Land Status data store. By displaying this theme for a given geographic area of interest the user shall be presented derived information which shall be able to satisfy initial inquiries about the status of the land. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report.

The default display of this theme shall contain all Subsurface Rights features. Each feature and its associated label shall be displayed using default symbology (see Appendix X).

The required relationship shall be maintained between the Subsurface Rights spatial data and its associated geographic location.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

Subsurface Rights attribute values shall be compared between adjacent geographic locations to determine if they are equal. If the values are equal, then the geographic locations shall be aggregated, interior lines dissolved, and one associated label displayed.

The system shall provide the user an option to display a subset of features contained within the Federal Subsurface Rights Theme. The selection criteria used to identify a specific subset of features shall be limited to the symbolization attribute value (e.g. specific subsurface rights). This option shall be activated from a menu selection made from the graphical user interface (GUI). Refer to Subsurface Right's table below.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land data shall be flowed back to process 1.2.6 for export.

The following features shall be included in this theme. Each feature subset is separated by a single line in the table. A further breakdown of each subset is denoted by an indentation and a dash.

Subsurface Rights
All Subsurface Estate
Public Domain - All Minerals
Public Domain - Oil & Gas
Public Domain - Coal
Public Domain - Other (incl exceptions, etc)
Acquired - All Minerals
Acquired - Oil & Gas
Acquired - Coal
Acquired - Restrictions (e.g., time and percent)

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Acquired - Other (incl exceptions, etc)
Complex

1.2.4.2.1.2.2 DISPLAY FEDERAL SURFACE RIGHTS

The display of the Federal Surface Rights Theme shall be based on alphanumeric attributes contained within the Land Status data store. By displaying this theme for a given geographic area of interest the user shall be presented derived information which may satisfy initial land status inquiries. If more detailed information is needed, the user shall be able to display specific case information themes or request an alphanumeric land status report.

The default display of this theme shall contain all Surface Rights features. Each feature and its associated label shall be displayed using default symbology (see Appendix X).

The required relationship shall be maintained between the Subsurface Rights spatial data and its associated geographic location.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

Surface rights attribute values shall be compared between adjacent geographic locations to determine if they are equal. If the values are equal, then the geographic locations shall be aggregated, interior lines dissolved, and one associated label displayed.

The system shall provide the user an option to display a subset of features contained within the subsurface rights theme. The selection criteria used to identify a specific subset of features shall be limited to the symbolization attribute value (e.g. specific surface rights). This option shall be activated from a menu selection made from the graphical user interface (GUI). Refer to Surface Right's table below.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land data shall be flowed back to process 1.2.6 for export.The following features shall be included in this theme. Each feature subset is separated by a single line in the table.

Surface Rights	
Public Land	
Acquired Land	
Right of Way (ROW)	
Easement	
FPA	
Other	(Multiple rights, air, timber, salmon, etc.)
Complex	

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TABLE 1 - Surface Rights Subset mapping to designated Surface LS_SMRY_RGTS_CD domain values.

Public Land	038
Acquired Land	038
Right of Way (ROW)	754, 756
Easement	731, 732, 733, 734, 735, 756
FPA	233, 234, 235
Other	All other valid codes

1.2.4.2.1.3 DISPLAY SEGREGATIONS

Segregation displays shall be based on alphanumeric attributes contained within the Land Status data store. Segregations shall be partitioned into two separate themes, subsurface segregations and surface segregations. By displaying segregations for a given geographic area of interest the user shall be presented derived information which may satisfy initial land status inquiries. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report.

1.2.4.2.1.3.1 DISPLAY SUBSURFACE SEGREGATIONS

The display of the Subsurface Segregations Theme shall be based on alphanumeric attributes contained within the Land Status data store. By displaying this theme for a given geographic area of interest the user shall be presented derived information which may satisfy initial land status inquiries. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report.

The default display for this theme shall contain all Subsurface Segregation features. Each feature and its associated label shall be displayed using default symbology (see Appendix X).

The required relationship shall be maintained between the Subsurface Segregations spatial data and its associated geographic location.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

Subsurface Segregation attribute values shall be compared between adjacent geographic locations to determine if they are equal. If the values are equal, then the geographic locations shall be aggregated, interior lines dissolved, and one associated label displayed.

The system shall provide the user an option to display a subset of features contained within the subsurface segregations theme. The selection criteria used to identify a specific subset of features shall be limited to the symbolization attribute(e.g. specific subsurface segregations). This option shall be activated from a menu selection made from the graphical user interface (GUI). Refer to Subsurface Segregations table below.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land data shall be flowed back to process 1.2.6 for export.

The following features shall be included in this theme. Each feature subset is separated by a single line in the table.

Subsurface Segregations
All Minerals
Locatable Minerals
Leasable Minerals
Other Minerals (Includes exceptions, etc.)

1.2.4.2.1.3.2 DISPLAY SURFACE SEGREGATIONS

The display of the Surface Segregations Theme shall be based on alphanumeric attributes contained within the Land Status data store. By displaying this theme for a given geographic area of interest the user shall be presented derived information which may satisfy initial inquiries about the status of the land. If more detailed information is needed, the user shall be able to display specific case information themes, or request an alphanumeric land status report.

The surface segregations theme shall optionally be selected from a dynamically updated user interface. The user interface shall be updated based on availability of themes in the established AOI.

The default display for this theme shall contain all Surface Segregation features. Each feature and its associated label shall be displayed using default symbology (see Appendix X).

The required relationship shall be maintained between the Surface Segregations spatial data and its associated geographic location.

Clarifications:

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display.

Surface Segregation attribute values shall be compared between adjacent geographic locations to determine if they are equal. If the values are equal, then the geographic locations shall be aggregated, interior lines dissolved, and one associated label displayed.

The system shall provide the user an option to display a subset of features contained within the surface segregations theme. The selection criteria used to identify a specific subset of features shall be limited to the symbolization (e.g. specific surface segregations). This option shall be activated from a menu selection made from the graphical user interface (GUI). Refer to Surface Segregations table below.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected land data shall be flowed back to process 1.2.6 for export.

The following features shall be included in this theme. Each feature subset is separated by a single line in the table.

Surface Segregations
All
Other (Including exceptions, etc.)

1.2.4.2.2 DISPLAY SPECIFIC CASE INFORMATION

Specific case information displays include event boundaries and case boundaries of like case type(s).

An event boundary encompasses all the land affected by a specific occurrence of a case event, group of related events, or group of synonymous events (e.g., relinquished, terminated, canceled). An event may relate to all of the land constituting a case (example could be an event/events used to establish case type status) or all/some of the land constituting the case (example could be an event/events used to establish case land status). The display of event boundaries should assist the user in visualizing the life cycle of a case by identifying the various case land status boundaries for individual pieces of land within a case, all of the lands within the case as determined by the case type status, and/or boundaries for which a particular event has occurred. Event boundaries shall be uniquely symbolized based on case type status, case land status, and/or event (depending on the query performed). A spatial query on an event boundary shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports. Alphanumeric information specific to a given case event shall subsequently be displayed to the user.

A case boundary represents the land currently within the case; i.e., all lands in a case, less those which have been rejected, withdrawn, relinquished, etc. The case boundary shall be determined by searching for specific case land status codes (dependent on case type) occurring within the case. The case boundary shall be uniquely symbolized to aid the user in identifying specific case type(s) and the specific case land status code(s). A spatial query on a case boundary shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports. Alphanumeric information specific to a given case shall subsequently be displayed to the user. The integration of spatial and alphanumeric information not only supports the ability to query the ALMRS database spatially, but to generate cartographic and export products.

The selection criteria shall be based on case type(s), specific case type status code(s), specific case land status code(s), and/or specific events. Since all case specific displays are geographically referenced, they shall optionally be overlaid and combined with other themes to aid the user in decision making. The user shall be able to quickly determine what cases are adjacent, or in close proximity, to their selected item of interest. Problems previously left undetected in the alphanumeric case data should be made more apparent to the user spatially, therefore facilitating improved quality assurance.

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1.2.4.2.2.1 DISPLAY OIL AND GAS LEASES AND AGREEMENTS THEME

The oil and gas theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on, or registered to, the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table. A further breakdown of each subset is denoted by an indentation and a dash.

Oil and Gas Leases and Agreements	
Leases	310112, 3107xx, 310911, 311xxx, 312xxx, 313200, 314xxx
Agreements - Unit Agreement - Communitization Agreement - Gas Storage Agreement - Development Contract	 3182xx 318310, 318320, 318330 318410 318510
KGS-FPGP	310070

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1.2.4.2.2.1.1 DISPLAY AGGREGATED O&G CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the oil and gas theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.1.2 DISPLAY O&G CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.1 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes.

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Oil and Gas (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.1.3 DISPLAY O&G CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the oil and gas theme. It shall be selected from a graphical user interface subsequent to the selection of the oil and gas theme.

Events related to oil and gas shall be categorized into groups, and each event group uniquely symbolized. The default display shall display all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.2 DISPLAY GEOTHERMAL LEASES AND AGREEMENTS THEME

The geothermal theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.The following features, based on case type, shall be included in this theme. Each feature subset is separated by a single line in the table. A further breakdown of each subset is denoted by an indentation and a dash.

Geothermal Leases and Agreements	
Leases	321xxx, 322xxx
Agreements - Unit Agreement 3282xx (except: 328230) - Participating Area 328230 - Communitization Agreement 328300 - Development Contract 328500	
KGRA	320070

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1.2.4.2.2.2.1 DISPLAY AGGREGATED GEOTHERMAL CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the geothermal theme.

Georelated and/or Caserelated scanned documents may be associated with a case feature displayed within the AOI. If so, an indicator will appear notifying the user that scanned documents exist for the feature. The user will have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list will generate another spatial window displaying the appropriate document.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.2.2 DISPLAY GEOTHERMAL CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to spatial objects. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.2 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/ or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Geothermal (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.2.3 DISPLAY GEOTHERMAL CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to spatial objects.

This display represents an increase in the level of detail depicted for the geothermal theme. It shall be selected from a graphical user interface subsequent to the selection of the geothermal theme.

Events related to geothermal shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events.These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.3 DISPLAY COAL AND SOLID MINERALS THEME

The coal and solid minerals theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case type, shall be included in this theme. Each feature subset is separated by a single line in the table.

Coal and Solid Minerals	
Coal Leases, Permits, Licenses, KLAs 34xxxx	
Solids or Non-Energy Leases and Permits 35xxxx KLA	350006

1.2.4.2.2.3.1 DISPLAY AGGREGATED COAL AND SOLID MINERALS CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the coal and solid minerals theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.3.2 DISPLAY COAL AND SOLID MINERALS CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to spatial objects. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.3 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/ or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The sytem shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Coal and Solid Minerals (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.3.3 DISPLAY COAL AND SOLID MINERALS CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the coal and solid minerals theme. It shall be selected from a graphical user interface subsequent to the selection of the coal and solid minerals theme.

Events related to coal and solid minerals shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events.These groups will include the event/ events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.4 DISPLAY MINERAL MATERIALS THEME

The mineral materials theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme.

Mineral Materials	
36xxxx (except:	3603xx)

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1.2.4.2.2.4.1 DISPLAY AGGREGATED MINERAL MATERIALS CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the mineral materials theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.4.2 DISPLAY MINERAL MATERIALS CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.4 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Mineral Materials (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.4.3 DISPLAY MINERAL MATERIALS CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the mineral materials theme. It shall be selected from a graphical user interface subsequent to the selection of the mineral materials theme.

Events related to mineral materials shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events.These groups will include the event/ events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.5 DISPLAY MINING PLANS AND LOCATION CLAIMS THEME

The mining plans and location claims theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table.

Mining Plans and Location Claims	
Mining Locations	381600, 3841xx, 3842xx, 3843xx, 3844xx
Mining Plans	380210, 3809xx
Contests	387100, 387200, 3920xx, 393001

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1.2.4.2.2.5.1 DISPLAY AGGREGATED MINING PLANS AND LOCATION CLAIMS CASES (FUTURE ENHANCEMENTS)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the mining plans and location claims theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.5.2 DISPLAY MINING PLANS AND LOCATION CLAIMS CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.5 is the subset of the lands within the case(s) with the case land status codes PN (Pending), AI (Authorized), and/or RC (Recorded).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Mining Plans and Location Claims (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.5.3 DISPLAY MINING PLANS AND LOCATION CLAIMS CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the mineral materials theme. It shall be selected from a graphical user interface subsequent to the selection of the mining plans and location claims theme.

Events related to mineral materials shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events.These groups will include the event/ events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.6 DISPLAY WITHDRAWALS, CLASSIFICATIONS, DETERMINATIONS, AND MULTI-MINERAL DEVELOPMENT THEME

This theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table.

Withdrwl, Classif, Determin, Mult Min Dev	
Withdrawal	23xxxx
Classification	24xxxx
Multiple Mineral Development	371000, 371100, 372000, 373000, 374000
Determinations	207000

1.2.4.2.2.6.1 DISPLAY AGGREGATED WITHDRAWALS, CLASSIFICATIONS, DETERMINATIONS, AND MULTI-MINERAL DEVELOPMENT CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.6.2 DISPLAY WITHDRAWALS, CLASSIFICATIONS, DETERMINATIONS, MULTI-MINERAL DEVELOPMENT CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.6 is the subset of the lands within the case(s) with the case land status codes PN (Pending), AI (Authorized), CI (Classification Issued), and/or WN (Withdrawn).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Withdrawals, Classifications, Determinations, Multi-Mineral Development (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.6.3 DISPLAY WITHDRAWALS, CLASSIFICATIONS, DETERMINATIONS, MULTI-MINERAL DEVELOPMENT CASE EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the theme. It shall be selected from a graphical user interface subsequent to the selection of the withdrawals, classifications, determinations, multi-mineral development theme.

Events related to this theme shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.7 DISPLAY LAND LEASES AND PERMITS THEME

The land leases and permits theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table.

Land Leases and Permits	
Leases	2911xx, 2912xx, 2913xx, 2914xx, 2916xx, 292007, 292020, 298402, 292601, 292602, 293001
Permits	289105, 290011, 2920xx, 292100, 292200, 292300, 292602, 298401 (except:292030)

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1.2.4.2.2.7.1 DISPLAY AGGREGATED LAND LEASES AND PERMITS CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the land leases and permits theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.7.2 DISPLAY LAND LEASES AND PERMITS CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.7 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Land Leases and Permits (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.7.3 DISPLAY LAND LEASES AND PERMITS EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the land leases and permits theme. It shall be selected from a graphical user interface subsequent to the selection of the theme.

Events related to this theme shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.8 DISPLAY RIGHTS OF WAY AND EASEMENTS THEME

The rights of way and easements theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced to land, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

Clarifications:

Three spatial components make up a ROW and Easement including a centerline, buffered area, and approximate location. Users shall be able to display these spatial components collectively or individually. The default display shall be of the centerline and its associated displayable attributes.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table.

Rights of Way and Easements		
ROW	28xxxx (except:	289101, 289106, 28xx09, 288102, 288105)
Easement	007504, 292030, 292500, 289101, 289106	

Future Enhancements:

1. The user will be able to differentiate between coordinate data that reflects an "applied for" location versus an "as built" location. Thus, users will have the option to graphically portray linear-based cases differently, based reliability of coordinate information.

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1.2.4.2.2.8.1 DISPLAY AGGREGATED RIGHTS OF WAY AND EASEMENT CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the Rights of Way and Easement theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.8.2 DISPLAY RIGHTS OF WAY AND EASEMENT CASES

The display of cases shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. The display of case centerlines shall be the default display for the theme (see design constraints for options). Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.8 is the subset of the lands within the case(s) with the case land status codes PN (Pending) and/or AI (Authorized).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Rights of Way and Easement (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.
A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.8.3 DISPLAY RIGHTS OF WAY AND EASEMENT EVENT

The display of case events shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the rights of way and easement theme. It shall be selected from a graphical user interface subsequent to the selection of the theme.

Events related to this theme shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.
ROWs and Easements shall optionally be associated with the ROW centerline, buffered area, and/or approximate location based on land description.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

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1.2.4.2.2.9 DISPLAY CONVEYANCES THEME

The conveyance theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme. Each feature subset is separated by a single line in the table.

Conveyance
Other 186xxx
Acquisition 21xxxx
Exchange 22xxxx
Occupancy 25xxxx
Grants 26xxxx
Sales 27xxxx
Mineral Patents 386xxx

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1.2.4.2.2.9.1 DISPLAY AGGREGATED CONVEYANCE CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the conveyance theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.9.2 DISPLAY CONVEYANCE CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.9 is the subset of the lands within the case(s) with the case land status codes PN (Pending), CV (Conveyed). and/or CL (Closed).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Conveyance (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export..

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the conveyance theme. It shall be selected from a graphical user interface subsequent to the selection of the theme.

Events related to conveyances shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events.

1.2.4.2.2.8.3 DISPLAY CONVEYANCE EVENT BOUNDARIES

The display of case events shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the conveyance theme. It shall be selected from a graphical user interface subsequent to the selection of the theme.

Events related to this theme shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.10 DISPLAY TRESPASS (UNAUTHORIZED USE) THEME

The trespass theme shall be comprised of spatial data linked to alphanumeric case attributes. The attribute values shall be used to determine the symbology used for the graphic display. The theme shall be built on or registered to the underlying land theme. Because it is geographically referenced, the user shall be able to view multiple themes of spatial data simultaneously. The user can visually identify case characteristics based on symbology. If more detailed information is needed, a user shall optionally be able to perform spatial queries on the graphic display. This initiates an alphanumeric query request which shall be submitted to 1.4, Process Alphanumeric Queries and Reports. The alphanumeric results of the query shall subsequently be displayed to the user in a separate text window.

The spatial data shall optionally be displayed by case, case type status, case land status, and event boundary. The default display for this theme shall be the current individual case boundaries. A selection from the graphical user interface shall change the display to case type status, case land status, and/or events.

This process shall be initiated from a selection made in process 1.2.4.5.6, Determine Themes to Display and optionally from 1.2.4.2.3 Display Single Case and 1.2.4.2.4 Display Results of Alphanumeric Query.

The following features, based on case types, shall be included in this theme.

Trespass
28xx09, 288102 ,288105, 2928xx, 3603xx

Clarification:

The actual name used to represent for trespass data in the user interface shall be "Unauthorized Use."

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1.2.4.2.2.10.1 DISPLAY AGGREGATED TRESPASS CASES (FUTURE ENHANCEMENT)

Based on a specific selection criteria, individual case boundaries will optionally be aggregated to provide the user with a more generalized view of cases in a given area of interest. The selection criteria will be based on case type(s), case type status code(s), case land status code(s) and/or specific events.

The aggregated display will be selected from a graphical user interface subsequent to selection of the trespass theme.

Clarifications:

Within a defined area of interest, compare adjacent cases and determine if they meet the specified selection criteria. If the criteria is met, the features (cases) will be aggregated, interior boundary dissolved, and one associated label displayed. Symbology will be based on the attributes used in the selection criteria.

A spatial query on the aggregated case feature will submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

1.2.4.2.2.10.2 DISPLAY TRESPASS CASE BOUNDARIES

The display of individual case boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features. This display represents the default display for the theme. Case boundaries represent the lands currently in case. The definition of current for the case types identified within process 1.2.4.2.2.10 is the subset of the lands within the case(s) with the case land status codes PN (Pending).

Each case shall be labelled with the case identifier and the case land status. Some cases shall be labelled with one or more additional attributes (see Appendix X).

If georelated and/or Caserelated scanned documents are associated with a case feature displayed within the AOI, an indicator shall appear notifying the user that scanned documents exist for the feature. The user shall have the capability to spatially query on the indicator and obtain a scroll list of the associated scanned document names. Making a selection from the scroll list shall generate another spatial window displaying the appropriate document.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on case type. Refer to the Trespass (Case Type) table above.

A spatial query on a case shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.2.10.3 DISPLAY TRESPASS EVENT BOUNDARIES

The display of case event boundaries shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric event information shall be linked to features.

This display represents an increase in the level of detail depicted for the trespass theme. It shall be selected from a graphical user interface subsequent to the selection of the theme.

Events related to this theme shall be categorized into groups, and each event group uniquely symbolized. The default display shall show all symbolized events. These groups will include the event/events used to determine case type status and the event/events used to establish case land status.

Clarifications:

The system shall provide the user an option to display a subset of features contained within the theme. The selection criteria shall be based on event type(s).

A spatial query on an event shall submit an alphanumeric query request to 1.4, Process Alphanumeric Queries and Reports.

A query request originating from process 1.2.6, Export ALMRS Spatial Data, shall not generate a spatial display. The selected case data shall be flowed back to process 1.2.6 for export.

1.2.4.2.3 DISPLAY SINGLE CASE

This process shall to generate a spatial display of an individual case based on the case identifier keyed in by the user. This process shall not affect the current AOI and shall generate a another spatial window (zoom window) containing only the geographic extent of the specified case.

The display of an individual case shall be based on alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, alphanumeric case information shall be linked to features.

Based on the defined AOI, the user shall have the capability to select a case by alphanumeric key-in of the case identifier or through a "point and click" selection of the case from the spatial display.

If a user attempts to select a case, through alphanumeric key in, which does not exist within the AOI, the user shall be notified.

If a user selects a case only partially contained within the AOI, then the user shall be notified. The user shall have the option to redefine their AOI to match the geographic extent of the selected case or abort the case query.

Once the case is determined to be within the AOI, the results of the query shall appear in a separate spatial window. The area covered by the display shall include a buffered area around the selected case and portray all case boundaries. The buffer size shall be a quarter mile greater than the linear distance of the case's minimum bounding rectangle (MBR). The default display shall include only the case boundaries. If the user wants to display event boundaries, a selection shall be made from the graphical user interface (GUI).

Clarification:

The case display shall contain all themes included in the baseline (standard) thematic view appropriate for the selected case type.

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1.2.4.2.4 DISPLAY RESULTS OF ALPHANUMERIC QUERY

This shall be a controlling process which takes information passed from 1.4.5, Process Shared Routines, and determines what thematic data is needed to create the desired spatial display.

The display of Land and Mineral based information shall be determined by the alphanumeric data contained within the ALMRS data store. Through the use of the Geographic Location Entity, the alphanumeric data shall be linked to features.

The alphanumeric query shall be limited to a specific area of interest (AOI). The definition of the AOI shall be created by process 1.4 and submitted to 1.2.4.5, Determine Query Criteria, before the results of the query are spatially displayed.

A spatial window shall be generated containing all the selected themes of interest within the defined AOI. The user shall be able to subsequently add or remove themes from the spatial display.

Clarifications:

The request for display shall contain the case identifiers needed to find the associated case types and geolocation identifiers. Based on case type a determination shall be made as to what themes or subsets of a theme are needed for display.

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1.2.4.3 DISPLAY REFERENCE THEMES

The display of reference theme data includes georeferenced, georelated, and case related themes. Once fully implemented georeferenced, georelated, and case related data will be used to support a variety of applications. An example would be the use of elevation data in determining suitability for a proposed right of way. For more information, see 1.2.1.

The user shall be provided an option to display from the selection of referenced themes contained within the AOI.

The user shall be provided with the option to display metadata information in a pop-up text window. Metadata shall be associated with each reference theme.

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1.2.4.3.1 DISPLAY REOREFERENCED THEMES

This process shall retrieve selected georeferenced theme(s) and either display this data or send it to Process 1.2.5 Generate Cartographic Products for the generation of cartographic products. The primary criteria to query what data to retrieve for a specific Area of Interest (AOI) shall be input from Process 1.2.4.5 Determine Query Criteria. For more information, see 1.2.1.1.

Georeference theme data shall also be used for defining the boundaries of Land & Mineral cases. When georeference themes are used to define boundaries, this process shall use process 1.2.2.2 Expanding Land Data. Through "heads up" digitizing and coordinate extraction, information shall be captured from the reference theme and used to populate the land theme (a land description shall be generated by process 3, Process Land Description Data). Other benefits can be achieved by using reference theme data as a quality control check to uncover conflicting georeferenced information.

Clarifications:

1. The georeferenced themes shall all be subdivided into subsets based on scale. This means that the data available for display are at scales that match these five theme's set scale subsets. A default set of scale subsets for each of the five themes shall include 1:24000, 1:63360, 1:100000, and 1:250000. The Geographic Record Maintainer at each State Office shall be able to customize the type and number of scale subsets for each of these Reference themes (e.g., add 1:12000 and 1:62500 to the default list).

2. Subset availability for selection shall be based on the theme's stored attribution schema for a theme (e.g., transportation scale and subsequent roads, railroads, and misc. transportation subsets).

1.2.4.3.2 DISPLAY GORELATED THEMES

This process shall retrieve selected georelated theme(s) and either display this data or send it to Process 1.2.5 Generate Cartographic Products for the generation of cartographic products. The primary criteria to query what data to retrieve for a specific Area of Interest (AOI) shall be input from Process 1.2.4.5 Determine Query Criteria. For more information, see 1.2.1.2.

Clarifications:

1. The following georelated themes which shall be displayed include: MTPs (MTPs containing complex data not collected by GCDB, or unsurveyed MTPs in AK), MTP supplemental plats, township and special survey plats, supplemental survey plats, connecting sheets, parcel maps, and for the Eastern States Office, Original Survey Plats.

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1.2.4.3.3 DISPLAY CASE RELATED THEMES

The purpose of this process shall be to retrieve selected case related data and display this data in conjunction with other data related to the case. The primary criteria to query what data to retrieve for a specific Area of Interest (AOI) shall be input from Process 1.2.4.5 Determine Query Criteria. For more information, see 1.2.1.3.

Clarifications:

1. The following georelated themes which shall be displayed include: Patents, Deeds, and case related documents.

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1.2.4.5 DETERMINE QUERY CRITERIA

The purpose of this process is to define an area of interest (AOI). Once the AOI is defined, a determination shall be made as to what spatial data is available for subsequent query and possible display. The output of this determination shall be presented to the user through a dynamically updated graphical user interface (GUI). The user shall have the capability to make theme selections interactively from the updated menu.

Through the use of the following processes: 1.2.4.1 Display Land Themes, 1.2.4.2 Display L&M Based Themes, and 1.2.4.3 Display Reference Themes, the user shall have the capability to select a subset of features contained within a specified theme. This information combined with the previous theme selections shall optionally be saved in a thematic view (TV). Once a TV has been saved the user shall have the capability to retrieve it in subsequent work sessions.

Through the use of the following processes: 1.2.4.1 Display Land Themes, 1.2.4.2 Display L&M Based Themes, and 1.2.4.3 Display Reference Themes. The user shall be able to edit label and arrow placements. This information along with the AOI and thematic view shall optionally be saved in a composite view (CV) and subsequently retrieved by this process.

Based on the available themes, this process shall determine the available baseline (standard) thematic views and update the appropriate menu.

Theme selections made interactively or through the use of CVs or TVs shall activate the display processes described in 1.2.4.1, 1.2.4.2, and 1.2.4.3.

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1.2.4.5.1 DEFINE AREA OF INTEREST (AOI)

The AOI represents the geographic extent of spatial data required by the user for producing a graphic display, cartographic product, or a digital export file. The user shall be able to define the geographic extent of any subsequent queries/reports performed on the data base. Establishing the AOI shall be an initial mandatory function performed by all users when working in the spatial environment. Any time the AOI is used for display or cartographic products, a buffer size of a quarter mile greater than the minimum bounding rectangle (MBR) created by the AOI shall be generated.

The user shall optimally be able to save and retrieve a defined AOI during the same session or future sessions. As a restricted activity, permissions shall be given to designated library managers the ability to create, modify, or delete an AOI within a shared library. Another option shall be a restricted capability of "moving" a user-defined AOI to the shared library.

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1.2.4.5.1.1 DEFINE AOI FOR SPATIAL QUERIES AND DISPLAYS

The system shall support three methods for defining an AOI : 1) by identifying existing ALMRS features; 2) by identifying existing spatial reference features; and 3) by entering coordinates defining the desired geographic extent.

1) Existing ALMRS features include but shall not be limited to rectangular land descriptions and geopolitical descriptions: Townships, sections, aliquots, counties, and case boundaries, (including all irregular shaped features). These features shall optionally be identified for inclusion or exclusion by Alphanumeric key-in or through "point and click" selection from the spatial display. The resulting AOI shall be defined by the geographic extent of the selected feature(s).

2) Spatial reference feature shall include but shall not be limited to USGS quadrangles in the following scales: 1:24000, 1:25000, 1:63360, 1:100000, 1:250000 and 1:500000. Quadrangle features shall optionally be selected by alphanumeric key-in or "point and click" selection from the spatial display. An alphanumeric key-in shall require entry of the map reference code and map scale. A "point and click" selection requires the use of a spatial display containing quadrangle boundaries. The resulting AOI shall be defined by the geographic extent of the selected reference feature(s).

3) Coordinate values shall optionally be entered by latitude and longitude. An alphanumeric key-in shall require entry of lat/long in degrees, minutes, and seconds. An spatial selection shall use a spatial display with a user defined rectangle created by a "clicking and dragging box" on the screen.

The user shall optionally be able to specify a date for the AOI which will allow the AOI to be defined with historical data. This date shall automatically be transferred to all subsequent queries of thematic data unless otherwise specified. (Future enhancement)

A user shall have the capability of saving a new AOI by any of the above capabilities. The defined AOI shall optionally be saved and recalled by a user during the same session or future sessions. A user shall have the option of modifying an existing AOI without loss of current work session results.

Clarifications:

If an AOI contains one or more discontinuous geographic areas, ALMRS modeled themes shall only be displayed for those areas specified in the AOI (not the MBR). However, the display of reference theme data shall default to the minimum bounding rectangle (MBR), with accompanying buffer, encompassing all the discontinous geographic areas. The user shall optionally be able to display reference theme data outside the boundaries of the AOI.

If a user retrieves a previously saved AOI, the selected AOI definition shall be examined to insure validity based on the current system date or user-defined historic date (Future enhancement). This is required since a spatial coordinate update, land description change, or alphanumeric case event could alter the geographic extent of an AOI or render it completely obsolete. User should have the option to redefine the AOI to the geographic extent of current features, select a new AOI, and/or delete the obsolete AOI.

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1.2.4.5.1.2 DEFINE AOI FROM A/N QUERY

This process shall accept, validate, and convert an AOI received from 1.4, Process Alphanumeric Queries and Reports. The AOI shall be used either to generate a spatial display or determine the geolocations completely contained within the AOI.

This process shall have the capability to retrieve a stored AOI based on the name supplied by 1.4, Process Alphanumeric Queries and Reports.

The AOI shall be examined to insure spatial validity based on date (Future enhancement)..

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1.2.4.5.2 DETERMINE AVAILABLE THEMES

This process shall determine the available themes within the defined AOI. Based on the results of the determination, the system shall present available themes to the user.

The determination of available reference themes shall be made based on metadata information.

The determination of available L&M based themes shall be made based on information stored in Spatial, Geolocation, and Case. Once the case identifier and associated case type are specified, the system shall determine what themes are present. (i.e., if a case exists within the AOI and has an associated case type of 31xxxx, the Oil and Gas Theme shall be made available.)

The determination of available land themes shall be made based on information stored in Spatial and Land.

Clarifications:

An AOI shall be defined before this process can be initiated.

This process shall optionally be called from 1.2.5, Generate Cartographic Products, or 1.2.6, Export ALMRS Spatial Data.

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1.2.4.5.2.1 DETERMINE AVAILABLE REFERENCE THEMES

Capability:

This process shall determine the availability of reference themes within the established AOI. The determination of available themes shall be made based on metadata information. After the availability of themes has been determined, the system shall present available reference themes to the user. The user shall subsequently be able to use the presented information for selecting the thematic data to be processed and displayed.

1.2.4.5.2.2 DETERMINE AVAILABLE CASE SPECIFIC THEMES

Capability:

This process shall determine the availability of case specific themes within the established AOI. The determination of available case specific themes shall be made based on information stored in Spatial, Geolocation, and Case. Once the case identifier and associated case type are specified, the system shall determine what themes are present (i.e., if a case exists within the AOI and has an associated case type of 31xxxx, the Oil and Gas Theme shall be made available). After the availability of themes has been determined, the system shall present available case themes to the user. The user shall subsequently be able to use the presented information for selecting the thematic data to be processed and displayed.

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1.2.4.5.2.4 DETERMINE AVAILABLE LAND THEMES

Capability:

This process shall determine the availability of land themes within the established AOI. The determination of available land themes shall be made based on information stored in Spatial and Land. After the availability of themes has been determined, the system shall present available land themes to the user. The user shall subsequently be able to use the presented information for selecting the thematic data to be processed and displayed.

1.2.4.5.3 SAVE/RETRIEVE THEMATIC VIEW

This process shall enable the user to save their present thematic selections and retrieve them at a later time. The thematic selections shall be contained within a thematic view (TV).

The user shall have the capability to name a TV and save it in their local workspace. Based on output from process 1.2.4.5.6 and the display processes in 1.2.4.1, 1.2.4.2, and 1.2.4.3, this process shall save the theme and subset selections in the TV. Possible subset selections shall be defined within each specific theme display process.

The user shall have the capability to retrieve a TV from a list of available TVs and have the selection denoted on the GUI. If all themes do not exist within the presently defined AOI, then the available themes shall be displayed and the user shall be notified of all missing themes. The user shall have the option of modifying existing TVs.

Clarifications:

Once a TV is retrieved, the appropriate display processes shall be called and the individual themes displayed.

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1.2.4.5.3.1 SAVE THEMATIC VIEW

Capability:

This process shall enable the user to save their present thematic selections to a view. The users shall be able to assign the thematic view (TV) a name that shall optionally be used in process 1.2.4.5.3.2 for retrieval. The system shall allow users to create a new TV by saving under a new name or update an existing view by saving changes under the existing name. The thematic data selections shall be contained within a TV.

The user shall have the capability to name a TV and save it in their local workspace. Based on output from process 1.2.4.5.6 and the display processes in 1.2.4.1, 1.2.4.2, and 1.2.4.3, this process shall save the theme and subset selections in the TV. Possible subset selections shall be defined within each specific theme display process.

1.2.4.5.3.2 RETRIEVE THEMATIC VIEW

Capability:

The user shall have the capability to retrieve a TV from a list of available TVs and have the selection denoted on the GUI. If all themes do not exist within the presently defined AOI, then the available themes shall be displayed and the user shall be notified of all missing themes.

Clarifications:

Once a TV is retrieved, the appropriate display processes shall be called and the individual themes displayed.

1.2.4.5.4 SAVE/RETRIEVE COMPOSITE VIEW

This process allows the user to save the definitions of their present spatial display and retrieve them at a later time. The AOI, thematic view (TV), and label and arrow edits are display definitions which shall optionally be stored in a composite view (CV). At a minimum the AOI and TV shall be required to create a CV.

The user shall have the capability to name a CV and save it in their local workspace. Based on output from process 1.2.4.5.6 and the display processes in 1.2.4.1, 1.2.4.2, and 1.2.4.3, this process shall save the display definitions in the CV.

A CV shall optionally be saved and recalled by a user during the same session or future sessions. A user shall have the option of defining new CVs or modifying existing CVs.

The user shall have the capability to select/retrieve a CV and have the selection denoted on the menu.

Clarifications:

Information referenced in the CV includes but shall not be limited to the following:

1. Area of Interest (AOI)
2. Selected thematic data (Thematic View - TV)
3. Symbology assignment table
4. Contrast/Brightness Parameters for displaying and plotting raster data
5. Labeling and arrow assignments
6. Cartographic template
7. Output parameters

Within this process only AOI, TV, symbology assignment table, and labeling and arrow assignments shall be modified. Default values shall be used for cartographic template and output parameters. Process 1.2.5, Generate Cartographic Products, provides the capability to modify all items contained within the CV.

Information contained within the composite view shall optionally be retrieved and edited. Once edited, the user shall have the capability to save the edited view to the existing CV or create a new one.

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1.2.4.5.4.1 SAVE COMPOSITE VIEW

This process shall enable the user to save the definitions of their present spatial display. The system shall allow users to create new CVs by saving under a new name or save edits to the current view by saving under its existing name. The AOI, thematic view (TV), Contrast and/Brightness Parameters, and label and arrow edits are display definitions which shall optionally be stored in a CV. At a minimum the AOI and TV shall be required to create a CV.

The user shall have the capability to name a CV and save it in their local workspace. Based on output from process 1.2.4.5.6 and the display processes in 1.2.4.1, 1.2.4.2, and 1.2.4.3, this process shall save the display definitions in the CV.

Clarifications:

Information referenced in the CV includes but shall not be limited to the following:

1. Area of Interest (AOI)
2. Selected thematic data (Thematic View - TV)
3. Symbology assignment table
4. Contrast/Brightness Parameters for displaying and plotting raster data
5. Labeling and arrow assignments
6. Cartographic template
7. Output parameters

Within this process only AOI, TV, symbology assignment table, and labeling and arrow assignments shall be modified. Default values shall be used for cartographic template and output parameters. Process 1.2.5, Generate Cartographic Products, provides the capability to modify all items contained within the CV.

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1.2.4.5.4.2 RETRIEVE COMPOSITE VIEW

This process allows the user to retrieve the definitions of their present spatial display. The user shall have the capability to retrieve the CV by name. This process shall allow the user to specify the CV that shall be input to process 1.2.4.5.6 and the display processes in 1.2.4.1, 1.2.4.2, and 1.2.4.3.

The user shall have the capability to select/retrieve a CV and have the selection denoted on the menu.

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1.2.4.5.5 DETERMINE AVAILABLE BASELINE (STANDARD) THEMATIC VIEWS

A baseline thematic view shall represent a structured query defining a collection of themes routinely requested by BLM users. This process determines the available baseline thematic views based on the presently defined AOI and currently available themes. This determination shall be based on output from process 1.2.4.5.2 and the baseline thematic view definitions outlined in the tables below.

The following baseline thematic views shall be made available if supporting data exists within the AOI:

1. Oil and Gas
2. Geothermal
3. Coal
4. Solid Minerals and Mineral Materials
5. Mining Claims, Mining Plans, and Mineral Contests
6. Title, ROW and Easement, Leases and Permits
7. Land
8. Land Status
9. Trespass
10. Withdrawals, Classifications, Determinations, and Multiple Mineral Development

Public room users shall not be permitted to display any trespass, withdrawal, classification, determination or multiple mineral development data.

Each of the following tables defines the data that shall be included in specific baseline thematic views. If a theme is considered mandatory for the view to be determined available, an asterisk will appear preceding the theme name.

Oil and Gas Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Subsurface Rights
Federal Surface Rights
Surface Segregations
Subsurface Segregations
* Oil and Gas Leases and Agreements

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Geothermal Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Subsurface Rights
Federal Surface Rights
Surface Segregations
Subsurface Segregations
* Geothermal Leases and Agreements

Coal & Solid Leasable Minerals Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Subsurface Rights
Federal Surface Rights
Surface Segregations
Subsurface Segregations
* Coal and Solid Minerals

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Solid Minerals and Mineral Materials Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Subsurface Rights
Federal Surface Rights
Surface Segregations
Subsurface Segregations
* Coal and Solid Minerals
* Mineral Materials

Note: Either the Coal and Solid Minerals Theme or the Mineral Materials Theme must be available within the defined AOI for this baseline view to be considered available.

Mining Claims, Mining Plans, and Mineral Contests Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Subsurface Rights
Federal Surface Rights
Surface Segregations
Subsurface Segregations
* Mining Plans and Location Claims

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Title, ROWs and Easements, Leases and Permits Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Surface Rights
Federal Subsurface Rights
Surface Segregations
Subsurface Segregations
* Land Leases and Permits
* Rights of Way and Easements
* Conveyances

Note: At least one of the mandatory themes (denoted by an *) must be available within the defined AOI for this baseline view to be considered available.

Land Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land

Land Status Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Surface Rights

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Federal Subsurface Rights
Surface Segregations
Subsurface Segregations

Trespass Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Surface Rights
Federal Subsurface Rights
Surface Segregations
Subsurface Segregations
* Trespass

Withdrawals,Classifications, Determinations and Multiple Mineral Development Thematic View
Rectangular/Rectangular Based Land
Geopolitical/Geopolitical Based Land
L&M Record-Based Land
SMA and Ownership
Federal Surface Rights
Federal Subsurface Rights
Surface Segregations
Subsurface Segregations
* Withdrawals, Classifications, Determinations, and Multi-Mineral Development

Clarifications:

A dynamically updated menu shall list all the available baseline thematic views and allow the user to interactively select the view of interest.

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Once a baseline thematic view is selected, the associated thematic selections shall be forwarded to process 1.2.4.5.6 for display.

A further refinement of the thematic data contained within each baseline thematic view is referenced in the Plat/Theme Matrix (see Appendix X).

1.2.4.5.6 SELECT THEMES TO DISPLAY

A dynamically updated menu shall be presented to the user. The menu shall contain all available themes within the presently defined AOI. The available themes shall be determined by process 1.2.4.5.2.

Based on the available themes, the user shall have the capability to select the desired themes from the menu. The graphical user interface (GUI) shall denote which themes have been selected or unselected.

Based on the themes selected, the user shall be able to save the thematic definition in a thematic view (TV). The user shall have the capability to save a TV and recall it during the same or future work sessions.

Clarification:

Based on the selections made in this process, the appropriate display processes shall be called and each theme subsequently displayed.

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